REMARKS

Claims 1-3, 5-9, 11-14, 16-19, 21-24, 26-29 and 31 are pending in this application, and are independent. Claims 26 and 31 have been amended to define still more clearly what Applicant regards as his invention. No change in scope of these claims is either intended or believed to be effected by these changes.

Claims 1-3, 5-9, 11-14, and 16 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent 5,699,170 to Yokose et al. in view of U.S. Patent 5,757,379 to Saito; and Claims 17-19, 21-24, 26-29, and 31, as obvious from Yokose et al. in view of U.S. Patent 5,379,070 to Retter et al.

The present invention is intended to provide a solution to certain problems which, in Applicant's view, exist in the field of image transmission and communication, such as by facsimile machines. In general, as explained in the present application, when transmission information (such as the date, time, and number of pages) is added onto image data to be transmitted, the image data that has been compressed and stored in memory is expanded and restored to original image data, the transmission information is added onto this original image data, and the resulting data is then compressed again and transmitted after compression. Since this procedure involves data compression and expansion at the time of transmission, the processing takes time. This problem can become particularly acute when dealing with a large amount of data.

The present invention relates to the transmission of an image in which transmission information for a header or footer (such as the date, time, and the number of pages) is added onto the transmitted image so that the receiving side may readily confirm the sender of the image and the number of pages in the transmission.[1]

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[1]/Of course, it is to be understood that the claims are not limited to the examples discussed.

Claim 1 is directed to an image communication apparatus in which an image is read and image data representing the image is generated. Further, transmission information for a header or footer is added onto the image data. The image data onto which the transmission information has been added is compressed, and the compressed image data is stored in a memory. And, the image data that has been stored in the memory is transmitted.

Among notable features of Claim 1 are adding transmission information for a header or footer onto image data, compressing the image data onto which the transmission information has been added, and transmitting the image data. Thus, the transmission information for a header or footer is embedded in original image data and comprises a part of the transmitted image data.

Yokose et al., as understood by Applicant, relates to communications between image communication systems which include image output means having different performance capabilities. The Office Action concedes that "Yokose et al. does not teach means for adding transmission information for a header or footer onto the image data;" and "means for compressing the image data onto which the transmission information has been added, but then asserts that Saito et al. teaches these quoted features in Fig. 4, and at column 2, lines 29-35 and column 5, lines 26-34 and 39-48." (See page 3 of the Office Action.)

Saito, as understood by Applicant, relates to an image communicating apparatus which provides so-called proper display of received images with facilitated user control. Fig. 3(a) shows the data format of communication image data. The communication image data consists of a communication text header 31 including fields of the total number of pages and the data compression mode, and a plurality of sets of page

header 32 and image data 33 for individual text pages. The page header 32 includes fields of the page size, image edit instruction information such as the rotational direction, and the coded data size. (See column 5, lines 26-34, cited in the Office Action.)

As noted above, the Office Action states that Saito teaches adding transmission information for a header or footer onto the image data and compressing the image data onto which the transmission information has been added. However, according to the data structure shown in Fig. 3(a) of Saito, headers 31 and 32 are separated from image data 33. In Saito, data to be transmitted comprises a combination of header information and original image data. Therefore, Saito does not teach or suggest that transmission information for a header or footer is embedded in original image data and comprises a part of transmitted image data. Thus, in Saito, a terminal which receives transmitted data must once read the headers 31 and 32 before processing (for example, expanding and printing) the image data 33.

In contrast, in the image communication apparatus of Claim 1, a terminal which received the transmitted image data can process the image data in a group without once reading the transmission information for a header or footer since the transmission information is added onto original image data, and the image data onto which the transmission information has been added is compressed.

Nothing in Yokose et al. or Saito, either separately or in any permissible combination (if any) teaches or suggests adding transmission information for a header or footer onto image data, compressing the image data onto which the transmission information has been added, and transmitting the image data, as recited in Claim 1.

Accordingly, Claim 1 is seen to be clearly allowable over Yokose et al. and Saito, either separately or in any permissible combination (if any).

- 17 -

Independent Claims 2, 3, 5-9, 11-14, and 16 each recite features similar to those discussed above in connection with Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

In addition, Claims 3, 9, and 14 also each include the feature of extracting image data from a buffer (for example, a line buffer) in prescribed area units of the image (for example, in each line of the image), adding transmission information for a header or footer onto the image data, and compressing the image data in the area units. Thus, the transmission information for a header or footer can be embedded in a line data of the original image data. Yokose et al. and Saito, either separately or in any permissible combination (if any) do not teach this feature. Accordingly, Claims 3, 9, and 14 are seen to be clearly allowable for at least this reason as well.

Claim 17 is directed to an image communication apparatus in which an image is read and image data is generated representing the image. The image data is compressed and a marker is added on that is for adding on transmission information for a header or footer. The compressed image data is stored in a memory. The apparatus includes means for detecting the marker from the image data that has been stored in the memory, and replacing, on the basis of a position at which the marker resides, some of the image data with data relating to transmission information.

One important feature of Claim 17 is replacing, on the basis of a position at which a marker resides, some of original image data with data relating to transmission information for a header or footer.

The Office Action concedes that "Yokose et al. does not teach adding on a marker that is for adding on transmission information for a header or footer and replacing, on the basis of a position at which the marker resides, some of the image data with data

relating to transmission information." (See page 13 of the Office Action.) The Office

Action states that "Retter et al. teaches adding on a marker that is for adding on

transmission information for a header or footer and replacing, on the basis of a position at

which the marker resides, some of the image data with data relating to transmission

information (Fig. 1 and column 1, lines 33-40 and column 4, lines 16-23 and 34-36 and 66-

67)."

Retter et al., as understood by Applicant, relates to parallel

encoding/decoding of DCT compression/decompression algorithms. The cited portions of

Retter et al. relate to adding a marker to data such as a JPEG file. However, Retter et al.

does not teach or suggest replacing some of the data such as a JPEG file with other data

based on the basis of a position of the marker. Retter et al. also does not teach or suggest

using a marker for adding transmission information for a header or footer onto image data.

Nothing in Yokose et al. or Retter et al., either separately or in any

permissible combination (if any) teaches or suggests replacing, on the basis of a position at

which a marker resides, some of original image data with data relating to transmission

information for a header or footer, as recited in Claim 1.

Accordingly, Claim 1 is seen to be clearly allowable over Yokose et al. and

Retter et al., either separately or in any permissible combination (if any).

Independent Claims 18, 19, 21-24, 26-29, and 31 each recite features

similar to those discussed above in connection with Claim 17, and are believed to be

patentable for at least the same reasons as discussed above in connection with Claim 17.

A review of the other art of record has failed to reveal anything which, in

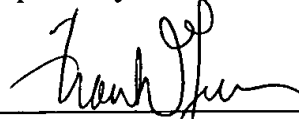Applicant's opinion, would remedy the deficiencies of the art discussed above, as

references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and its entry is therefore believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, she is respectfully requested to contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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